

TSMC-99-105



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2812
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Commissioner of Patents and Trademarks
Washington, D.C. 20231

Fr: George O. Saile, Reg. No. 19,572
20 McIntosh Drive
Poughkeepsie, N.Y. 12603

Subject:

Serial No. 09/759,908 01/16/01

Y.H. Chen, J.C. Twu, W. Chang

MULTILAYER INTERFACE IN COPPER CMP
FOR LOW K DIELECTRIC

Grp. Art Unit: 2812

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.

The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56. Copies of each document is included herewith.

U.S. Patent 6,004,188 to Roy, "Method for Forming Copper
Damascene Structures by Using a Dual CMP Barrier Layer",
describes a method for forming copper damascene structures by
using a dual chemical mechanical polish (CMP) barrier layer.

U.S. Patent 6,010,962 to Liu et al., "Copper Chemical-Mechanical-Polishing (CMP) Dishing", discloses a Chemical-Mechanical Polish (CMP) planarizing method that avoids dishing.

U.S. Patent 5,512,163 to Warfield, "Method for Forming a Planarization Etch Stop", discloses a mechanical polishing method that uses an etch-stop layer consisting of a metal and grit material, i.e., diamond powder, over a conductive layer.

U.S. Patent 5,854,133 to Hachiya et al., "Method for Manufacturing a Semiconductor Device", discloses a chemical mechanical polish (CMP) planarizing method that utilizes a polysilicon film as an etch-stop.

Sincerely,

A handwritten signature in black ink, appearing to read 'SBA', with a long horizontal flourish extending to the right.

Stephen B. Ackerman,
Reg. No. 37761

(Use several sheets if necessary)

Application Number

09 / 759,908

Y.H.-Chen, et al.

01/16/01

Group 1st Unit

2812

U. S. PATENT DOCUMENTS

~~MAR 26 2001~~

WINNER
TALL

DOCUMENT NUMBER

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SUBCLUE

PLUMBATE
X ATROMATE

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Roy

451

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9/10/98

6	0	1	0	9	6	2	1/4	00
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Liu et al.

438

687

2/12/99

55121634/30/96

Warfield

205

109

4/1/94

5854133122998

Hachiya et al.

438

692

8/15/96

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER

DATE

COUNTRY

CLASS.

SUBCLASS

Translation

YES	NO
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OTHER DOCUMENTS (Including Author, Title, Date, Portion or Pages, Etc.)

EXHIBIT

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.